the 10th/11/2010 F. Günther Gymnasium Lohbrügge – Hamburg

Observation of a lesson

IT activity

Level : "Profile P1" (preparing high school diploma) Number of pupils : 16
Duration : 45 mn

The lesson takes place in the IT classroom, each pupils can access a computer with a local network and internet.
A video projector is connected to the computers and allow each screen to be projected..

Purpose of the lessons : write a program in Java language (with the use of the educational software BlueJ to compile and visualise the functions and the results on a simplified interface).

The pupils began IT lessons in the 9th grade (at about 15 years old) with two lessons per week. In the « Profile P1 » grade (before high school diploma) the pupils can choose this subject as an option, thus the number of lessons is increased at 4 per week.
If in the first grades only some simple functions are studied, in the 9th grade the oriented object language is taught (as an example and to have an idea of the level : variable encapsulation, private or public methods…). Some examples as analysing the result of a person' weight, simulating on account as facebook (with personal data and a list of friends…) are used to teach these notions.

The pupils work in an autonomous way following the indications given at the beginning of the lesson, the papers or examples can be download from the network. The teacher makes very few interventions, just to know how far are the pupils or to solve a particular problem. Before calling the teacher the pupils communicate with each other, they prefer to find the solution themselves. When the work is about to be finished, one or two solutions are shown, by pupils chosen by the teacher (or voluntaries). The solutions are projected to the whole classroom, the pupils discuss and argue, giving corrections or hypotheses, at the end the teacher improves and finalizes the work that has been presented.
During certain lessons, the teacher, for a duration of 10 to 15 minutes (not more) gives some theoretical information about programs in oriented object language (variables, loops…) or indications more general about programming.
Naturally the works become more complex as the lessons go on, at the end, it gives a program including all the new notions that have been taught.

Conclusion : The pupils seem to enjoy learning IT by programming, this give them a real IT culture. The pupils observed are really able to use the bases of programming language for being initiated to algorithms and this with material and exercises adapted to their level, and more over they are really motivated for these lessons.